

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

<b>Appellants:</b>	Heinz Hofmann, et al.	<b>Examiner:</b>	Aileen Baker Felton
<b>Serial No.:</b>	10/714,800	<b>Art Unit:</b>	1793
<b>Filed:</b>	November 17, 2003	<b>Docket:</b>	15550Z
<b>For:</b>	PROCESS FOR THE PRODUCTION OF PRESSED INSENSITIVE EXPLOSIVE MIXTURES	<b>Dated:</b>	December 29, 2008

**Confirm. No.:** 2932

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41**

Sir:

In response to the Examiner's Answer dated October 28, 2008, appellants respectfully submit this Reply Brief.

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**CERTIFICATE OF ELECTRONIC FILING**

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Dated: December 29, 2008

  
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Leslie S. Szivos, Ph.D.

## REMARKS

Favorable allowance of the claims of the present application on appeal is respectfully requested upon consideration of the remarks provided in this paper together with the remarks submitted in Appellants' Appeal Brief dated July 9, 2008.

In the Examiner's Answer of October 28, 2008 a new ground of rejection was raised in which all the claims on appeal, i.e., Claims 1, 3-7 and 10-13, are rejected under U.S.C. § 112, second paragraph as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter in which the appellants regard as the invention. In particular, the Examiner correctly asserts that the claims all recite that TATB binds the secondary explosive within the claimed process. The Examiner then however alleges that the claims are indefinite in that "...in all of the examples, a powder is formed and does not show that any binding occurs merely by the addition of the TATB binding." The Examiner thus concludes that it is unclear how any resultant binding is caused by this coating. See page 3, item 1 last full paragraph of the Examiner's Answer.

In response to the indefinite rejection raised in the Examiner's Answer of October 28, 2008, appellants respectfully submit that the claims on appeal are clear and definite as currently written. Specifically, Claim 1, on appeal, positively recites a process for producing an insensitive explosive mixture comprising depositing sonochemically aminated 1,3,5-triamino-2,4,6-trinitrobenzene (TATB) in an amount of less than 15 % by weight onto secondary explosive crystals to form a coating of said TATB on said secondary explosive crystals which binds said secondary explosive crystals.

Appellants observe that the specification clearly denotes that the inventive process results in TATB binding the secondary explosive crystals. See, for example, page 5, lines 3-5 and lines 12-14.

Appellants further observe that the claimed process on appeal clearly defines in a precise manner that when sonochemically aminated TATB is deposited in an amount of less than 15% by weight onto secondary explosive crystals a coating of said TATB is formed on the secondary explosive crystals which binds the secondary explosive crystals. That is, during the deposition process the claimed TATB coating adheres to the secondary explosive crystals (see, for example, page 7, third paragraph from the bottom of the page); the explosive crystals are of a rather hard structure whereas the binding TATB is a rather soft or flexible structure. Therefore, it is quite clear to one skilled in the art that explosive crystals coated with 'soft' TATB, when brought together, are bound by the TATB since the flexible structure of the TATB naturally holds together by itself. As such, the TATB forms a kind of binding matrix for the explosive crystals.

An analogy to the above, which would be well known to a person of ordinary skill in the art, is when preparing a dough including chocolate chips or raisins, the chips or raisins are held together by the soft dough.

In view of the above remarks, appellants respectfully submit that the claims on appeal particularly point out and distinctly define the metes and bounds of the subject matter that appellants regard as their invention. As such, the indefiniteness rejection newly raised in the Examiner's Answer has been obviated. Reconsideration and withdrawal of the indefiniteness rejection are thus respectfully requested.

In the Examiner's Answer, the obviousness rejection of Claims 1, 3-7, 10, 12 and 13 citing the combined disclosures of Cramer et al. (US 6,345,577 B1), Berg et al. (US 4,770,728) and Lee et al. (US 6,547,899) has been maintained. Also, the obvious rejection of Claim 11 citing the combined disclosures of Cramer, Berg et al., Lee et al. and Highsmith et al. (US 6,425,966) has been maintained in the Examiner's Answer. In response to these obviousness rejections, appellants reiterate the arguments and remarks made in appellants' Appeal Brief.

In item 10 of the Examiner's Answer, the Examiner has provided his response to appellants' previous arguments for patentability. In particular, the Examiner appears to suggest that Cramer et al. discloses that the coating of TATB penetrates the propellant grains. As such, the Examiner concludes that the TATB disclosed in Cramer et al. would help to bind the crystals together. The Examiner further queries on why appellants indicated that since Cramer et al. used an additional binder that the TATB disclosed in Cramer et al. would not also bind. Appellants observe in this regard that Cramer et al. uses an organic binder to provide a propellant grain component in which the organic binder holds the explosive crystals together. The TATB then coats the propellant grain component including the bonded explosive crystals to cause burning rate alteration of the grain component. This point was discussed within the paragraph bridging pages 11 and 12 of the previously submitted Appeal Brief.

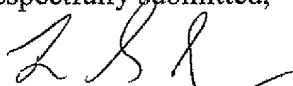
With respect to Lee et al., appellants observe that at page 7 of the Examiner's Answer the Examiner stated that "Applicant also argued that there is no teaching of sonochemically animated TATB". Appellants observe in this regard that they stated that "Lee et al. provides a method for producing fine grained TATB powders utilizing a single-step sonochemical animation process". See, first full sentence of the last paragraph appearing at page

12 of the previously submitted Appeal Brief. The appellants thus did not state that Lee et al. provides no teaching of sonochemically animated TATB. Instead, appellants argued in the last full paragraph of page 12 and the first full paragraph appearing on page 13 of the previously submitted Appeal Brief that Lee et al. does not teach or suggest that the TATB *powders* produced by Lee et al.'s sonochemically animated process can be used to bind secondary explosive crystals together.

Based on the above arguments and remarks, appellants respectfully submit that the claims on appeal are patentable. Thus, appellants respectfully submit that the rejections imposed on the claims on appeal have been obviated and this must be reversed.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment in connection herewith to Deposit Account No. 19-1013/SSMP.

Respectfully submitted,



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